Shell Exploration & Production

U.S. EPA, Region 10
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Re: Comments on the Draft National Pollutant Discharge Elimination System (NPDES) Geotechnical General Permit for the Beaufort and Chukchi Seas

Shell Exploration and Production Company (Shell), for purposes of these comments representing Shell Offshore Inc. and Shell Gulf of Mexico Inc., the largest holders of Outer Continental Shelf (OCS) leases in the Beaufort and Chukchi Seas, is pleased to have the opportunity to respond to the draft NPDES General Permit released by your agency for Geotechnical Activities in the Beaufort and Chukchi Seas (draft Geotechnical GP) (EPA 2013).

The regulation of geotechnical activities in the Arctic Ocean is a matter of great importance to Shell and to other leaseholders. In order for development and production to proceed in the Arctic OCS, it is imperative that operators receive timely, usable permits to conduct advance geotechnical activities in the federal and state waters adjacent to Alaska's northern coast. These authorizations enable operators to perform pre-development surveys of soil conditions along potential pipeline routes and at potential production facility locations. A delay in the release of a rational, scientifically-based permit for geotechnical discharges will result in a commensurate delay in the production of first oil from the U.S. Arctic OCS. Such a delay not only has commercial implications for industry, but also will result in foregone royalty revenue for the federal government and foregone tax revenue and opportunities for Alaskans. Delayed offshore development in Alaska may also compromise the availability of future crude supply to the Trans-Alaska Pipeline System (TAPS), thereby jeopardizing the continued viability of the pipeline.

The draft Geotechnical GP includes provisions that are likely to frustrate critical geotechnical programs that Shell has planned for the five-year term of the permit. Many of these provisions were adopted verbatim from the EPA's Arctic Oil and Gas Exploration General Permits for the Chukchi and Beaufort Seas (Exploration GPs) (EPA 2012). These provisions will increase the overall environmental impact of a geotechnical program by increasing the number of assets at a site, as well as the duration of time these assets spend at a site. This will result in increased air emissions and subsea ensonification, and an increase in the volume of general vessel wastestreams that must be discharged at a site. The environmental impact of these permit provisions is arguably greater than any potential impact from actual geotechnical boring.

There are substantial differences between exploration drilling and geotechnical surveys. Given these differences, it is not reasonable for the EPA to rely on the Exploration GPs as templates for the draft Geotechnical GP. The differences between exploration drilling and geotechnical surveys include:

- Discharge Volumes - A geotechnical boring produces a small percentage of the discharges associated with exploration drilling. Geotechnical borings covered under the permit will be between 50 and 499 feet in depth. In contrast, the tophole section of an exploration well (the section of the well most comparable to a geotechnical borehole) is generally around 1,200 feet, with the balance of the well drilled to depths of 10,000 feet or more. Additionally, the diameter of a geotechnical boring is 4-12 inches whereas the diameter of the tophole section of an exploration well is 26-42 inches.
- Drilling Fluids – Many geotechnical boreholes are drilled solely with seawater. When drilling fluids are used for boring, they consist primarily of seawater. Other additives relied on for geotechnical boring include simple viscosifiers such as xanthan gum and bentonite clay, which are similar to products used to drill water wells. In contrast, exploration drilling requires a more complex array of products to maintain the stability of much deeper and larger holes.
- Duration & Footprint of Operations – A geotechnical program is generally executed with one vessel and its relatively small crew, while a drilling rig has larger crews and is supported by multiple vessels. A geotechnical vessel is operating at a boring site typically from several hours to a day, and up to 2-3 days on occasion, while an exploration drilling rig and its constituent fleet may remain on-site in excess of 30-45 days.

Despite the significant differences between exploration drilling and geotechnical surveys, the draft Geotechnical GP that the EPA has developed is at points even more restrictive than the Exploration GPs that are currently in effect for the Beaufort and Chukchi Seas. The draft Geotechnical GP creates the potential for an extended whaling closure in the Chukchi Sea that is based on "perceived impacts" as opposed to actual impacts. The draft Geotechnical GP also includes testing and monitoring provisions that are more stringent than the analogous requirements set forth in the Exploration GPs. For example, the Exploration GPs require Effluent Toxicity Testing for general vessel discharges four times per a well, while the draft Geotechnical GP requires these discharges to be tested weekly or once per discharge event (EPA 2013, Section II.A.13).

As set forth in this letter and the attached documents, Shell strongly objects to the inclusion of permit requirements and conditions that are not grounded in science or supported by the Ocean Discharge Criteria Evaluation (ODCE) that the EPA prepared in conjunction with the draft Geotechnical GP. The Environmental Monitoring Program (EMP) requirements and whaling closures in the draft Geotechnical GP are prime examples of the disconnect between the permit and the science and reality of geotechnical surveys. In the case of the EMP, the draft Geotechnical GP requirements are significantly outsized to the extremely limited extent and magnitude of potential impacts from geotechnical activities. The EMP requirements have been taken primarily from the Exploration GPs for the Beaufort and Chukchi Seas, which have marginal relevance to the regulation of geotechnical activities.

The whaling closures in the draft Geotechnical GP are equally problematic. These closures extend into the Chukchi Sea and are broader even than those stipulations that Shell voluntarily made in past Conflict Avoidance Agreements (CAA) with the Alaska Eskimo Whaling Commission (AEWC). These closures are not supported by the ODCE; there is substantial science to support an ODCE finding

that, even without these closures, the permitted discharges would not cause an "unreasonable degradation of the marine environment." The connection the EPA makes between these closures and the ten criteria it must consider in the ODCE is extremely tenuous. The EPA speculates that "even the perception of contamination could produce an adverse effect by causing hunters to avoid harvesting particular species or from particular areas" (EPA 2013, xi). However, the ODCE does not include evidence that subsistence users actually harbor misperceptions about geotechnical work. Further, there is no evidence within the ODCE to indicate that subsistence users would modify their practices if geotechnical boring was ongoing in the Chukchi or Beaufort Seas during their whaling seasons.

Even if it were true that local residents did alter their diets due to concerns over "tainted" subsistence resources, any health impacts from that change in diet are not within the scope of the regulatory ocean discharge criteria. Those criteria (found at 40 CFR § 125.122) focus on actual degradation of the marine environment, not imagined harms. One of the factors that the EPA must consider is "potential impacts on human health through direct and indirect pathways." Potential health effects from a presumed change in diet due to an unfounded fear of tainted foods is not a pathway at all. Such speculative concerns simply do not fall within the scope of the ODCE, which focus on science, not imagination.

The lack of scientific rationale to support the draft Geotechnical GP requirements is underscored when it is compared to other discharge permits applicable in the region, including the EPA's Vessel General Permit (VGP), the State of Alaska's draft Geotechnical General Permit (State Geotechnical GP) and the International Convention for the Prevention of Pollution from Ships (MARPOL). Nine of the twelve waste streams regulated under the draft Geotechnical GP are general vessel waste streams unrelated to geotechnical boring; yet, the EPA consistently applies restrictions to these discharges in the draft Geotechnical GP that are more stringent than those applied to similar discharges in other permits for the region. For example, the VGP requires vessels to perform bi-annual fecal coliform testing, while the draft Geotechnical GP requires this testing to be performed weekly or each time a geotechnical vessel moves to a new OCS block, which is virtually every three nautical miles while surveying. The ODCE does not support the EPA's imposition of more stringent testing and treatment requirements on general vessel discharges associated with oil and gas geotechnical surveys. The draft Geotechnical GP requirements for general vessel discharges should be no more stringent than those included in the VGP.

The EPA's draft Geotechnical GP—unlike the State of Alaska's draft Alaska Pollutant Discharge Elimination System (APDES) General Permit for the Geotechnical Activities in the Beaufort and Chukchi Seas—covers only geotechnical discharges associated with "oil and gas" activities. It is not clear why the EPA limited its permit in this manner, nor is it clear whether the EPA would apply different restrictions to geotechnical discharges undertaken in the region for activities *not* associated with "oil and gas" activities, such as a wind farm. The EPA should be mindful of the precedent it is setting for the future regulation of geotechnical discharges in Alaska's federal waters when it drafts the final Geotechnical GP. Permittees associated with the oil and gas industry should be regulated by the EPA in a manner that is consistent with the manner in which the EPA regulates permittees associated with other industries or the government.

With respect to precedent, the EPA should also consider the lack of precedent for many of the provisions in its draft Geotechnical GP. The draft Geotechnical GP is without an analogue in other regions regulated by the EPA, including the Gulf of Mexico and the Cook Inlet. Further, many of the provisions in the permit have never previously been applied by the EPA to geotechnical discharges.

When coupled with the lack of scientific rationale for some aspects of the permit, this indicates an arbitrary and unreasonable approach to the regulation of geotechnical activities in the Arctic OCS. If this approach is not modified, and the unprecedented and unsupported provisions persist in the final permit, they will increase the safety risk, environmental impact (including increased air emissions), cost, and time associated with conducting a geotechnical program in the Chukchi and Beaufort Seas. As drafted, the permit will necessitate that all geotechnical vessels working in the Arctic be equipped with a helideck and that all Arctic geotechnical programs include helicopter support and a science vessel tasked with conducting environmental monitoring activities. Draft permit requirements would necessitate nearly daily helicopter travel to and from a geotechnical vessel. This travel would be required to facilitate the transfer of samples from a vessel to laboratories in Anchorage and Seattle. Frequent helicopter travel has cost and safety implications and increases the potential for noise disturbances to local communities and subsistence users.

The draft Geotechnical GP must be substantially reformed. The final permit should only include requirements that are scientifically justified, within the purview of the EPA to regulate under the Clean Water Act (CWA), and of a demonstrable benefit to the marine environment. When developing the final permit, the EPA should be mindful of the principles set forth in Executive Order 12866. These principles require that agencies consider the costs and benefits of a proposed regulation and only adopt a regulation following a "reasoned determination that the benefits of the intended regulation justify its costs." The Executive Order also requires that agencies base their decisions on "the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation." The approximate cost of a single season of geotechnical surveys that Shell has planned for the five-year term of this permit is currently estimated at $25 to $45 million. Compliance with the unprecedented and unsubstantiated provisions in the permit will increase these costs by an estimated $25 to $30 million per season. There is no indication in the draft Geotechnical GP, Fact Sheet or ODCE that the EPA ever considered the provisions of Executive Order 12866 when evaluating the inclusion of some of these more onerous provisions.

Shell respectfully requests that the EPA incorporate the changes identified in this letter and the attached narrative and table into the final Geotechnical GP. If you have any questions please contact Susan Childs at (907) 646-7112.

Sincerely,

Peter E. Slaiby
Vice President, Shell Alaska

Attachments:

1. Narrative Comments on the Draft Geotechnical GP for the Beaufort and Chukchi Seas
2. Table of Comments on the Draft Geotechnical GP for the Beaufort and Chukchi Seas